



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Attorney Docket: 990471U2

SA
Coper
1-7-03

Re Application of: Nathan G. Clark, et al.

Attorney Docket: 990471U2

Serial No.: 09/810,792

Group Art Unit: 3641

Filed: March 16, 2001

Examiner: Nelson, Peter A.

For: **OIL WELL PERFORATOR LINER WITH
HIGH PROPORTION OF HEAVY METAL**

RESPONSE TO OFFICE ACTION OF MAY 29, 2002

Assistant Commissioner for Patents
Box Non-Fee Amendments
Washington, DC 20231

RECEIVED
DEC 06 2002
GROUP 3641

Sir:

In response to the Office Action mailed May 29, 2002, a request for extension of time being filed herewith, please amend the application as follows:

In the Claims:

✓ Cancel Claims 23 and 24.

Claim 1. (Amended) A [liner for a] shaped charge comprising:
a casing for a shaped charge;
an explosive material disposed within the casing having a cavity formed therein; and
a mixture of powdered heavy metal and powdered binder metal [formed into a rigid
body] wherein
the percentage of heavy metal in the mixture is within a range of approximately
[90.0%] 91.0% to 99.98% by weight.

Claim 2. (Amended) A [liner for a] shaped charge according to claim 1
wherein
the heavy metal powder is chosen from the group consisting of tungsten, tantalum,
[hafnium, silver,] gold, platinum, [copper,] or any mixture thereof.

Claim 3. (Amended) A [liner for a] shaped charge according to claim 1
wherein
the heavy metal consists [essentially] primarily of tungsten.